

Structure attributes must be viewed using STN Express query preparation.

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L2          4 SEA SSS SAM L1

=> s 11 full
L3          89 SEA SSS FUL L1

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=> s 13
L4          187 L3

=> s 13 and pd< feb 2003
     187 L3
     23718371 PD< FEB 2003
     (PD<20030200)
L5          12 L3 AND PD< FEB 2003

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L5  ANSWER 1 OF 12  CAPLUS  COPYRIGHT 2009 ACS on STN
AN  2003:734131  CAPLUS  Full-text
DN  140:349942
TI  SVT-40776, a new selective M3 muscarinic antagonist: human receptor
    binding profile and bladder effects in the guinea pig
AU  Salcedo, C.; Balsa, D.; Enrich, A.; Davalillo, S.; Pellicer, T.; Lagunas,
    C.; Catena, J.; Fernandez-Serrat, A.; Farrerons, C.; Fernandez, A. G.
CS  Laboratorios SALVAT, Spain
SO  Neurourology and Urodynamics (2003), 22(5), 382-384
CODEN: NEUREM; ISSN: 0733-2467
PB  Wiley-Liss, Inc.
DT  Journal
LA  English
AB  The study aims to determine the effect of SVT-40776, a novel substituted
    quinuclidine derivative with high M3 receptor affinity, on the different human
    muscarinic receptors through radioligand binding assays and to evaluate its
    activity on the intra-vesical and arterial pressure in anesthetized animals.
    SVT-40776 exhibits high affinity, in the sub-nanomolar range, for the human M3
    muscarinic receptor, being the most potent ligand among all the reference
    compds. assayed. It also shows the highest selectivity of human M3 vs. the M2
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subtype, among all the reference antagonists tested. SVT-40766 is the most potent compound inhibiting the bladder contractions, at the very low dose of 17.1 nmol/kg i.v.

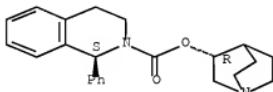
IT 242478-37-1, Solifenacin

RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(comparison; human muscarinic receptor binding profile and effects on guinea pig bladder contraction of SVT-40776, a new selective M3 muscarinic antagonist)

RN 242478-37-1 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,
(3R)-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:57905 CAPLUS Full-text

DN 138:100946

TI Medicinal composition for treatment of interstitial cystitis

IN Ikeda, Ken; Takeuchi, Makoto

PA Yamanouchi Pharmaceutical Co., Ltd., Japan

SO PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|--------------|
| PI | WO 2003006019 | A1 | 20030123 | WO 2002-JP6904 | 20020708 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2449922 | A1 | 20030123 | CA 2002-2449922 | 20020708 <-- |
| | CA 2449922 | C | 20081125 | | |
| AU | 2002315814 | A1 | 20030129 | AU 2002-315814 | 20020708 <-- |
| AU | 2002315814 | B2 | 20070531 | | |
| EP | 1405638 | A1 | 20040407 | EP 2002-741446 | 20020708 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| BR | 2002010873 | A | 20040622 | BR 2002-10873 | 20020708 |

| | | | | |
|---------------------|----|----------|----------------|----------|
| CN 1527708 | A | 20040908 | CN 2002-814030 | 20020708 |
| CN 1270708 | C | 20060823 | | |
| ZA 2003009632 | A | 20041222 | ZA 2003-9632 | 20020708 |
| RU 2290929 | C2 | 20070110 | RU 2004-103746 | 20020708 |
| JP 4174673 | B2 | 20081105 | JP 2003-511825 | 20020708 |
| US 20040138252 | A1 | 20040715 | US 2003-479798 | 20031205 |
| US 7335668 | B2 | 20080226 | | |
| IN 2003KN1677 | A | 20060303 | IN 2003-KN1677 | 20031229 |
| MX 2004000124 | A | 20040521 | MX 2004-124 | 20040107 |
| KR 874815 | B1 | 20081219 | KR 2004-700284 | 20040109 |
| IN 2007'KN02175 | A | 20070817 | IN 2007-KN2175 | 20070614 |
| US 20090105298 | A1 | 20090423 | US 2008-3908 | 20080103 |
| PRAI JP 2001-209041 | A | 20010710 | | |
| WO 2002-JP6904 | W | 20020708 | | |
| US 2003-479798 | A1 | 20031205 | | |
| IN 2003-KN1677 | A3 | 20031229 | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

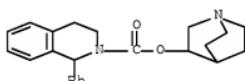
AB A capsaicin-sensitive sensory nerve depressant which contains quinuclidine-3'-yl 1-phenyl-1,2,3,4-tetrahydroisoquinoline-2-carboxylate or a salt thereof as the active ingredient. It is a remedy for a urol. disease selected among interstitial cystitis, hyperesthesia in the lower urinary tract, and prostatitis.

IT 180272-14-4 180272-14-4D, salts

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(quinuclidine-3'-yl 1-phenyl-1,2,3,4-tetrahydroisoquinoline-2-carboxylate and its salts for treatment of interstitial cystitis, hyperesthesia in the lower urinary tract, and prostatitis)

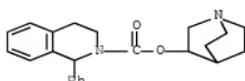
RN 180272-14-4 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, 1-azabicyclo[2.2.2]oct-3-yl ester (CA INDEX NAME)



RN 180272-14-4 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, 1-azabicyclo[2.2.2]oct-3-yl ester (CA INDEX NAME)



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

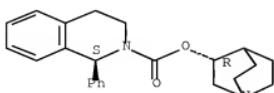
L5 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:554144 CAPLUS Full-text
 DN 137:163148
 TI Irritable bowel syndrome neuropharmacology: A review of approved and investigational compounds
 AU Callahan, Michael J.
 CS Department of Medical Affairs, Novartis Pharmaceuticals Inc., East Hanover, NJ, 07936, USA
 SO Journal of Clinical Gastroenterology (2002), 35(1, Suppl.), S58-S67
 CODEN: JCGADC; ISSN: 0192-0790
 PB Lippincott Williams & Wilkins
 DT Journal; General Review
 LA English
 AB A review. Anticholinergics and prokinetics are mainstays of therapy for Irritable Bowel Syndrome (IBS) patients despite their limited efficacy and troublesome side-effect profile. The clin. limitations of these drugs are a result of their relative broad and nonspecific pharmacol. interaction with various receptors. Recent advances in gut physiol. have led to the identification of various receptor targets that may play a pivotal role in the pathogenesis of IBS. Medicinal chemists searching for safe and effective IBS therapies are now developing compds. targeting many of these specific receptors. The latest generation of anticholinergics, such as zanifenacin, darifenacin, and YM-905, provide selective antagonism of the muscarinic type-3 receptor. Tegaserod, a selective 5-HT4 partial agonist, tested in multiple clin. trials, is effective in reducing the symptoms of abdominal pain, bloating, and constipation. Ezolopitant and nepadudant, selective antagonists for neurokinin receptors type 1 and type 2, resp., show promise in reducing gut motility and pain. Loperamide, a mu (μ) opioid receptor agonist, is safe and effective for IBS patients with diarrhea (IBS-D) as the predominant bowel syndrome. Fedotozine, a kappa (κ) opioid receptor agonist, has been tried as a visceral analgesic in various clin. trials with conflicting results. Alosetron, a 5-HT3 receptor antagonist, has demonstrated efficacy in IBS-D patients but incidents of ischemic colitis seen in post-marketing follow-up resulted its removal from the market. Compds. that target cholecystokinin A, N-methyl-D-aspartate, alpha2-adrenergic, and corticotropin-releasing factor receptors are also examined in this review.
 IT 242478-38-2, YM-905
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (irritable bowel syndrome neuropharmacol.: approved and investigational compds.)
 RN 242478-38-2 CAPLUS
 CN Butanediol acid, compd. with (1S)-(3R)-1-azabicyclo[2.2.2]oct-3-yl 3,4-dihydro-1-phenyl-2(1H)-isoquinolinecarboxylate (1:1) (CA INDEX NAME)

CM 1

CRN 242478-37-1
CMF C23 H26 N2 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 110-15-6
CME C4 H6 O4HO₂C—CH₂—CH₂—CO₂H

OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)
 RE.CNT 100 THERE ARE 100 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

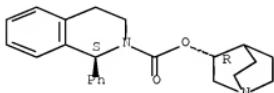
L5 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2002:525396 CAPLUS Full-text
 DN 138:198423
 TI M3 receptor antagonism by the novel antimuscarinic agent solifenacina in the urinary bladder and salivary gland
 AU Ikeda, Ken; Kobayashi, Seiji; Suzuki, Mami; Miyata, Keiji; Takeuchi, Makoto; Yamada, Toshimitsu; Honda, Kazuo
 CS Institute for Drug Discovery Research, Yamanouchi Pharmaceutical Co. Ltd., 21 Miyukigaoka, Tsukuba, Ibaraki, 3058585, Japan
 SO Naunyn-Schmiedebergs Archives of Pharmacology (2002), 366(2), 97-103
 CODEN: NSAPCC; ISSN: 0028-1298
 PB Springer-Verlag
 DT Journal
 LA English
 AB The antimuscarinic profile of the exptl. drug solifenacina/YM905 [(+)-(1S,3'R)-quinuclidin-3'-yl-1-phenyl-1,2,3,4-tetrahydroisoquinoline-2- carboxylate] for the treatment of overactive bladder was compared with the commonly prescribed agent oxybutynin. In radioligand binding assays, pKi values of solifenacina for M1, M2, and M3 receptors were 7.6, 6.9, and 8.0, resp. These values for oxybutynin were 8.6 (M1), 7.7 (M2), and 8.9 (M3). Solifenacina and oxybutynin antagonized the contractile effect of carbachol (CCh) on isolated guinea pig urinary bladder smooth muscle (detrusor), displaying the neg. logarithm of antagonist apparent affinity constant (pK_a value) of 7.1 for solifenacina and 7.4 for oxybutynin. To study the tissue selectivity between bladders and salivary glands, guinea pig detrusor and mouse submandibular gland cells were stimulated with CCh and monitored for intracellular Ca²⁺, as determined by Fura 2 fluorescence. Ca²⁺ mobilization of detrusor cells was inhibited equipotently by solifenacina (pK_i=8.4) and oxybutynin (pK_i=8.6), whereas that of the gland cells was antagonized less potently by solifenacina (pK_b=7.4) than by oxybutynin (pK_b=8.8), although the M3 subtype mediated both cell responses. In anesthetized rats, solifenacina (63-2100 nmol kg⁻¹ or 0.03-1 mg kg⁻¹) dose-dependently inhibited CCh-stimulated increases in urinary bladder pressure, while its inhibitory effects on salivation and bradycardia were apparent only at a dose of 2100 nmol kg⁻¹. In contrast, oxybutynin within a dose range of 77-770 nmol kg⁻¹ (0.03-0.3 mg kg⁻¹) inhibited responses of the bladder and salivary gland slightly more potently than that of the heart. In addition, inhibitory effects of darifenacina indicated a major role of M3 receptors in the bladder and salivary gland. Therefore, M3 receptor antagonism by solifenacina could be bladder-selective. This selectivity remains to be elucidated and may provide new approaches to the pharmacotherapy of overactive bladder.
 IT 242478-37-1, Solifenacina 242478-38-2, YM905
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(M3 receptor antagonism solifenacin in urinary bladder and salivary gland)

RN 242478-37-1 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, (3R)-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 242478-38-2 CAPLUS

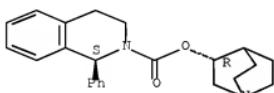
CN Butanedioic acid, compd. with (1S)-(3R)-1-azabicyclo[2.2.2]oct-3-yl 3,4-dihydro-1-phenyl-2(1H)-isoquinolinecarboxylate (1:1) (CA INDEX NAME)

CM 1

CRN 242478-37-1

CMF C23 H26 N2 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 110-15-6

CMF C4 H6 O4



OSC.G 70 THERE ARE 70 CAPLUS RECORDS THAT CITE THIS RECORD (70 CITINGS)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:268535 CAPLUS Full-text

DN 136:299715

TI Quinuclidine derivatives as ciliary muscle relaxants

IN Kawamoto, Yoko; Waki, Mitsunori

PA Senju Pharmaceutical Co., Ltd., Japan; Yamanouchi Pharmaceutical Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 9 pp.

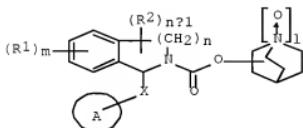
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|------|----------|-----------------|--------------|
| PI JP 2002104968 | A | 20020410 | JP 2000-296464 | 20000928 <-- |
| PRAI JP 2000-296464 | | 20000928 | | |
| OS MARPAT 136:299715 | | | | |
| GI | | | | |



I

AB The invention provides a quinuclidine derivative I (A = cyclic aryl, cycloalkyl, cycloalkenyl, etc; X = single bond, methylene; R1 = halogen, OH, lower alkoxy, carboxyl, lower alkoxycarbonyl, lower acyl, mercapto, etc.; R2 = H, OH, lower alkoxy, lower alkyl; l = 0-1; m = 0-3; n = 1-2) or its salt or ternary ammonium compound, suitable for use as a ciliary muscle relaxant for prevention or treatment of myopia, asthenopia, and glaucoma. An eyedrop containing (1S,3'R)-3'-quinuclidinyl-1-phenyl-1,2,3,4-tetrahydro-2-isoquinoline carboxylate succinate 3, sodium monohydrogen phosphate dodecahydrate 0.1, NaCl 0.9, HCl q.s. to pH = 7, benzalkonium chloride 0.005 g, and water balance to 100 mL was formulated, and tested its effect on carbachol-induced contraction of ciliary muscle in rabbit eyes.

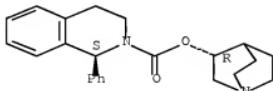
IT 242478-37-1 242478-38-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(quinuclidine derivs. as ciliary muscle relaxants)

RN 242478-37-1 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,
(3R)-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 242478-38-2 CAPLUS

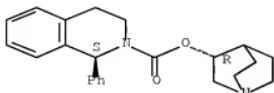
CN Butanedioic acid, compd. with (1S)-(3R)-1-azabicyclo[2.2.2]oct-3-yl 3,4-dihydro-1-phenyl-2(1H)-isoquinolinecarboxylate (1:1) (CA INDEX NAME)

CM 1

CRN 242478-37-1

CMF C23 H26 N2 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 110-15-6
CMF C4 H6 O4HO₂C—CH₂—CH₂—CO₂H

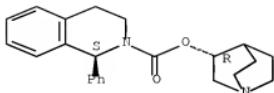
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L5 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2001:827646 CAPLUS Full-text
 DN 136:145169
 TI YM905, a novel M3 antagonist, inhibits Ca²⁺ signaling and c-fos gene expression mediated via muscarinic receptors in human T cells
 AU Fujii, Takeshi; Kawashima, Koichiro
 CS Department of Pharmacology, Kyoritsu College of Pharmacy, Minato-ku, Tokyo, 105-8512, Japan
 SO General Pharmacology (2000), 35(2), 71-75
 CODEN: GEPHDP; ISSN: 0306-3623
 PB Elsevier Science Inc.
 DT Journal
 LA English
 AB Our earlier observations suggest that M3 muscarinic acetylcholine (ACh) receptors (mAChRs) are involved in Ca²⁺ signaling and regulation of c-fos gene expression in T lymphocytes. Here, we describe the effects of YM905, a novel M3 antagonist, on evoked Ca²⁺ signaling and c-fos gene expression in CEM human leukemic T cells. YM905 significantly inhibited increases in intracellular free Ca²⁺ evoked by 10 μM oxotremorine-M, an M1/M3 agonist (IC₅₀=100 nM), and also inhibited 10 μM oxotremorine-M-induced upregulation of c-fos gene expression at 1 μM. These findings demonstrate that YM905 antagonizes the intracellular responses in T cells induced via mAChRs, possibly M receptors.
 IT 242478-38-2, YM905
 RL: PAC (Pharmacological activity); BIOL (Biological study)
 (YM905 inhibits Ca²⁺ signaling and c-fos gene expression mediated via muscarinic receptors in human T cells)
 RN 242478-38-2 CAPLUS
 CN Butanediol acid, compd. with (1S)-(3R)-1-azabicyclo[2.2.2]oct-3-yl 3,4-dihydro-1-phenyl-2(1H)-isoquinolinecarboxylate (1:1) (CA INDEX NAME)

CM 1

CRN 242478-37-1
CMF C23 H26 N2 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 110-15-6
CMF C4 H6 O4HO₂C—CH₂—CH₂—CO₂H

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)
 RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2001:552377 CAPLUS Full-text
 DN 135:313448
 TI Effects of YM905, a novel muscarinic M3-receptor antagonist, on experimental models of bowel dysfunction *in vivo*
 AU Kobayashi, Seiji; Ikeda, Ken; Suzuki, Mami; Yamada, Toshimitsu; Miyata, Keiji
 CS Pharmacology Laboratories, Institute for Drug Discovery Research, Yamanouchi Pharmaceutical Co., Ltd., Tsukuba, 305-8585, Japan
 SO Japanese Journal of Pharmacology (2001), 86(3), 281-288
 CODEN: JUPAAZ; ISSN: 0021-5198
 PB Japanese Pharmacological Society
 DT Journal
 LA English
 AB We investigated the effects of YM905 [(+)-(1S,3'R)-quinuclidin-3'-yl 1-phenyl-1,2,3,4-tetrahydroisoquinoline-2-carboxylic acid monosuccinate], a new orally active muscarinic M3-receptor antagonist, on bowel dysfunction *in vivo* using exptl. models that reproduce the symptoms present in irritable bowel syndrome (IBS). YM905 potently inhibited restraint stress-induced fecal pellet output in fed rats (ED50: 4.0 mg/kg) and diarrhea in fasted rats (ED50: 1.7 mg/kg), with similar potencies to the inhibition of bethanechol-, neostigmine- and nicotine-induced fecal pellet output in rats (ED50: 3.3, 7.9 and 4.5 mg/kg, resp.). YM905 also inhibited 5-hydroxytryptamine (5-HT)-, prostaglandin E2- and castor oil-induced secretory diarrhea in mice (ED50: 5.5, 14 and 6.3 mg/kg, resp.), but showed no significant effect on cholera toxin-induced intestinal secretion in mice. In addition, YM905 (3, 10 mg/kg) reversed morphine-decreased postprandial defecation in ferrets, a model of spastic constipation, whereas ramosetron, a 5-HT3-receptor antagonist, was not effective. The mode of YM905 action was similar to that of darifenacin, a selective M3-receptor antagonist, with equivalent potencies. By contrast, propantheline, an antimuscarinic drug that has been used for IBS, was much less potent. These results show that YM905 ameliorates a wide spectrum of bowel dysfunctions through the blockade of M3 receptors, suggesting its therapeutic potential for treating IBS.
 IT 242478-37-1, YM 905

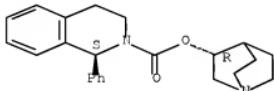
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effects of YM905 on exptl. models of bowel dysfunction)

RN 242478-37-1 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,
(3R)-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OSC.G 19 THERE ARE 19 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2000:451981 CAPLUS Full-text

DN 133:317043

TI YM-905 (Yamanouchi Pharmaceutical Co Ltd)

AU Heading, Christine E.

CS Open University, Ruislip, HA4 7DD, UK

SO Current Opinion in Central & Peripheral Nervous System Investigational Drugs (2000), 2(3), 321-325

CODEN: COCDFA; ISSN: 1464-844X

PB PharmaPress Ltd.

DT Journal; General Review

LA English

AB A review with 23 refs. Yamanouchi is developing YM-905, a selective M3 muscarinic receptor antagonist, as a potential treatment for urinary incontinence and irritable bowel syndrome (IBS). It is in phase II trials in the US and Europe as a potential treatment for urinary incontinence and in phase I trials in Japan for IBS. Launch in the US and European markets is expected between 2003 and 2005. The drug shows a high affinity for the M3 receptor (Ki = 12 nM in rats) and effectively inhibits rhythmic bladder contractions without the common atropinic side effects such as dry mouth in humans. In preclin. studies, YM-905 (the succinate salt of the same free base of which YM-53705 is the monochloride salt) potently and competitively inhibited carbachol-induced contractions of guinea pig colon, with a pA₂ value of 7.5. It was also shown to inhibit restraint stress-induced defecation and diarrhea over a dose range of 1-30 mg/kg. Preclin. studies have demonstrated that YM-53705 inhibited an increase in calcium and upregulated c-fos gene expression in a human T-cell line stimulated with oxotremorine. It has been suggested that YM-53705 modulates T-cell function via M3 receptors.

IT 242478-37-1P, YM 905

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

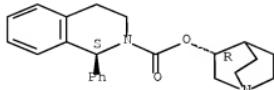
(pharmacol. of YM 905 for treatment of urinary incontinence and irritable bowel syndrome)

RN 242478-37-1 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,

(3R)-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

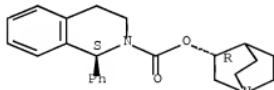
Absolute stereochemistry. Rotation (+).



RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2000:433740 CAPLUS Full-text
 DN 133:317413
 TI Gastric cytoprotective activity of ilicic aldehyde in rats and mice
 AU Donadel, O. J.; Maria, A.; Wendel, G.; Guerreiro, E.; Giordano, O.
 CS Química Organica, INTEQUI-CONICET, Argent.
 SO Molecules [Electronic Publication] (2000), 5(3), 462-464
 CODEN: MOLEFW; ISSN: 1420-3049
 URL: <http://www.mdpi.org/molecules/papers/50300252.pdf>
 PB Molecular Diversity Preservation International
 DT Journal; (online computer file)
 LA English
 AB Ilicic alc., a natural sesquiterpene, was previously converted to its aldehyde by Jones' oxidation. The aldehyde prevented the formation of gastric mucosal lesions induced by EtOH and other necrotizing agents in mice and rats.
 IT 242478-37-1
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (gastric cytoprotective activity of ilicic aldehyde)
 RN 242478-37-1 CAPLUS
 CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,
 (3R)-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

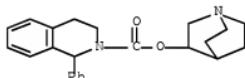
L5 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1999:731705 CAPLUS Full-text
 DN 132:202452
 TI YM-905: treatment of urinary incontinence, muscarinic M3 antagonist
 AU Mealy, N.; Castaner, J.
 CS Prous Science, Barcelona, 08080, Spain
 SO Drugs of the Future (1999), 24(8), 871-874

CODEN: DRFUD4; ISSN: 0377-8282
 PB Prous Science
 DT Journal; General Review
 LA English
 AB A review, with 7 refs., discussing the synthesis and the pharmacol. actions of the title compound
 IT 180272-15-5P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (YM-905: treatment of urinary incontinence, muscarinic M3 antagonist)
 RN 180272-15-5 CAPLUS
 CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, 1-azabicyclo[2.2.2]oct-3-yl ester, ethanedioate (1:1) (CA INDEX NAME)

CM 1

CRN 180272-14-4

CMF C23 H26 N2 O2



CM 2

CRN 144-62-7

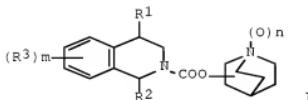
CMF C2 H2 O4



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1998:35996 CAPLUS [Full-text](#)
 DN 128:114881
 OREF 128:22529a,22532a
 TI Preparation of quinuclidine-containing isoquinolines and muscarine M3 receptor antagonists containing them
 IN Naito, Ryo; Takeuchi, Makoto; Okamoto, Yoshinori; Ikeda, Masaru; Isomura, Yasuo
 PA Yamanouchi Pharmaceutical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|------|----------|-----------------|--------------|
| PI JP 10007675 | A | 19980113 | JP 1996-162221 | 19960621 <-- |
| PRAI JP 1996-162221 | | 19960621 | | |
| OS MARPAT 128:114881 | | | | |
| GI | | | | |



AB Isoquinolines I (R1 = OH, lower alkoxy, lower alkyl; R2 = aryl, cycloalkyl, heterocycl; R3 = halo, OH, lower alkoxy, CO2H, lower alkoxy carbonyl, lower acyl, etc.; m = 0-3; n = 0, 1) or their salts, useful as muscarine M3 receptor antagonists, are prepared (±)-Trans-1-phenyl-1,2,3,4-tetrahydro-4-isoquinolinol (0.28 g) was treated with 0.28 g (3R)-3-quinuclidinyl chloroformate.HCl at room temperature for 2.5 h to give 0.15 g trans-(1S,3'R,4S)- and trans-(1R,3'R,4R)-I (R1 = OH, R2 = Ph, R3 = H, n = 0). I was tested for in vitro muscarine receptor affinity and in vivo antagonistic activity.

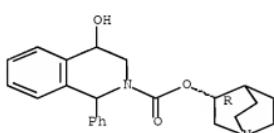
IT 201660-36-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of quinuclidine-containing isoquinolines as muscarine M3 receptor antagonists)

RN 201660-36-8 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-4-hydroxy-1-phenyl-, (3R)-1-azabicyclo[2.2.2]oct-3-yl ester (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1996:516723 CAPLUS Full-text

DN 125:167804

OREF 125:31441a,31444a

TI Preparation of new quinuclidine derivatives as muscarinic M3 receptor antagonists

IN Takeuchi, Makoto; Naito, Ryo; Hayakawa, Masahiko; Okamoto, Yoshinori; Yonetoku, Yasuhiro; Ikeda, Ken; Isomura, Yasuo

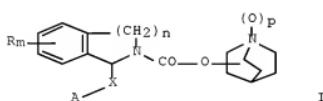
PA Yamanouchi Pharmaceutical Co., Ltd., Japan
 SO PCT Int. Appl., 75 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| PI WO 9620194 | A1 | 19960704 | WO 1995-JP2713 | 19951227 <-- |
| W: AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KE, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2208839 | A1 | 19960704 | CA 1995-2208839 | 19951227 <-- |
| CA 2208839 | C | 20060131 | | |
| AU 9643553 | A | 19960719 | AU 1996-43553 | 19951227 <-- |
| AU 695616 | B2 | 19980820 | | |
| EP 801067 | A1 | 19971015 | EP 1995-942276 | 19951227 <-- |
| EP 801067 | B1 | 20030305 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE | | | | |
| CN 1171109 | A | 19980121 | CN 1995-197088 | 19951227 <-- |
| CN 1045601 | C | 19991013 | | |
| HU 77006 | A2 | 19980302 | HU 1997-1895 | 19951227 <-- |
| HU 223778 | B1 | 20050128 | | |
| RU 2143432 | C1 | 19991227 | RU 1997-112907 | 19951227 <-- |
| JP 3014457 | B2 | 20000228 | JP 1996-520367 | 19951227 <-- |
| JP 2000109481 | A | 20000418 | JP 1999-291267 | 19951227 <-- |
| PL 182344 | B1 | 20011231 | PL 1995-321019 | 19951227 <-- |
| AT 233761 | T | 20030315 | AT 1995-942276 | 19951227 |
| ES 2193208 | T3 | 20031101 | ES 1995-942276 | 19951227 |
| FI 9702775 | A | 19970822 | FI 1997-2775 | 19970627 <-- |
| FI 115631 | B1 | 20050615 | | |
| NO 9703027 | A | 19970828 | NO 1997-3027 | 19970627 <-- |
| NO 318026 | B1 | 20050124 | | |
| US 6017927 | A | 20000125 | US 1997-860377 | 19970828 <-- |
| US 6174896 | B1 | 20010116 | US 1999-312392 | 19990514 <-- |
| PRAI JP 1994-327045 | A | 19941228 | | |
| JP 1996-520367 | A3 | 19951227 | | |
| WO 1995-JP2713 | W | 19951227 | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 125:167804

GI



AB Quinuclidine derivs. I [ring A = optionally substituted aryl, cycloalkyl, cycloalkenyl, heteroaryl containing 1 to 4 heteroatoms selected from among oxygen, nitrogen and sulfur, or 5- to 7-membered saturated heterocycle; X = single bond or methylene; R = halo, hydroxy, lower alkoxy, carboxy, lower alkoxy carbonyl, lower acyl, mercapto, lower alkylthio, sulfonyl, lower

alkylsulfonyl, sulfinyl, lower alkylsulfinyl, sulfonamido, lower alkanesulfonamido, carbamoyl, thio-carbamoyl, mono- or di(lower alkyl)carbamoyl, nitro, cyano, amino, mono- or di(lower alkyl)amino, methylenedioxy, ethylenedioxy or lower alkyl optionally substituted by halogeno, hydroxy, lower alkoxy, amino or mono- or di(lower alkyl)amino; p = 0 or 1; m = integer of 1 to 3; n = integer of 1 or 2), their salts, N-oxides, or quaternary ammonium salts, having an antagonistic effect on muscarinic M3 receptors and are useful as a preventive or remedy for urol. diseases, respiratory diseases or digestive diseases, are prepared. Thus, Et 1-phenyl-1,2,3,4-tetrahydro-2-isoquinolinecarboxylate (preparation given) was reacted with 3-quinuclidinol in toluene containing NaH at 140° for 2 days to give the title compound 3-quinuclidinyl 1-phenyl-1,2,3,4-tetrahydro-2-isoquinolinecarboxylate isolated as the oxalate salt. In an in vitro study, I had Ki values of 10-3 to 10-10 M against muscarinic M3 receptors.

IT 180272-14-4P 180272-15-5P 180272-16-6P

180272-23-5P 180272-24-6P 180272-25-7P

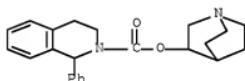
180272-28-0P 180272-29-1P 180468-37-5P

180468-38-6P 180468-39-7P 180468-40-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of new quinuclidine derivs. as muscarinic M3 receptor antagonists)

RN 180272-14-4 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, 1-azabicyclo[2.2.2]oct-3-yl ester (CA INDEX NAME)



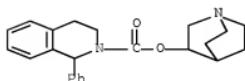
RN 180272-15-5 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, 1-azabicyclo[2.2.2]oct-3-yl ester, ethanedioate (1:1) (CA INDEX NAME)

CM 1

CRN 180272-14-4

CMF C23 H26 N2 O2



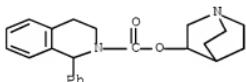
CM 2

CRN 144-62-7

CMF C2 H2 O4



RN 180272-16-6 CAPLUS
 CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,
 1-azabicyclo[2.2.2]oct-3-yl ester, hydrochloride (1:1) (CA INDEX NAME)

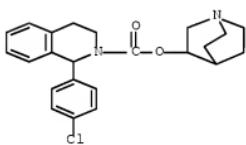


● HCl

RN 180272-23-5 CAPLUS
 CN 2(1H)-Isoquinolinecarboxylic acid, 1-(4-chlorophenyl)-3,4-dihydro-,
 1-azabicyclo[2.2.2]oct-3-yl ester, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 180272-22-4
 CMF C23 H25 Cl N2 O2



CM 2

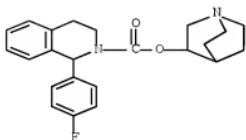
CRN 110-17-8
 CMF C4 H4 O4

Double bond geometry as shown.



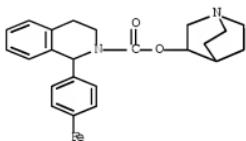
RN 180272-24-6 CAPLUS
 CN 2(1H)-Isoquinolinecarboxylic acid, 1-(4-fluorophenyl)-3,4-dihydro-,

1-azabicyclo[2.2.2]oct-3-yl ester (CA INDEX NAME)



RN 180272-25-7 CAPLUS

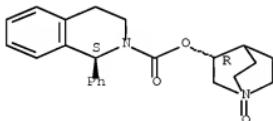
CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-(4-methylphenyl)-, 1-azabicyclo[2.2.2]oct-3-yl ester (CA INDEX NAME)



RN 180272-28-0 CAPLUS

CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-, (3R)-1-oxido-1-azabicyclo[2.2.2]oct-3-yl ester, (1S)- (CA INDEX NAME)

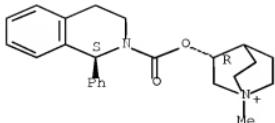
Absolute stereochemistry.



RN 180272-29-1 CAPLUS

CN 1-Azoniarabicyclo[2.2.2]octane, 3-[[[(1S)-3,4-dihydro-1-phenyl-2(1H)-isoquinolinyl]carbonyl]oxy]-1-methyl-, iodide (1:1), (3R)- (CA INDEX NAME)

Absolute stereochemistry.

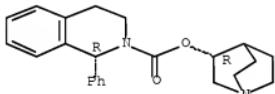


● I⁻

RN 180468-37-5 CAPLUS

CN 2(1H)-Isoquinoliniccarboxylic acid, 3,4-dihydro-1-phenyl-,
(3R)-1-azabicyclo[2.2.2]oct-3-yl ester, hydrochloride (1:1), (1R)- (CA
INDEX NAME)

Absolute stereochemistry. Rotation (-).

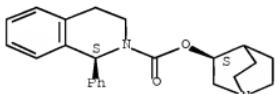


● HCl

RN 180468-38-6 CAPLUS

CN 2(1H)-Isoquinoliniccarboxylic acid, 3,4-dihydro-1-phenyl-,
(3S)-1-azabicyclo[2.2.2]oct-3-yl ester, hydrochloride (1:1), (1S)- (CA
INDEX NAME)

Absolute stereochemistry. Rotation (+).

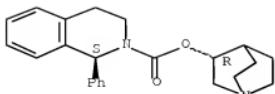


● HCl

RN 180468-39-7 CAPLUS

CN 2(1H)-Isoquinoliniccarboxylic acid, 3,4-dihydro-1-phenyl-,
(3R)-1-azabicyclo[2.2.2]oct-3-yl ester, hydrochloride (1:1), (1S)- (CA
INDEX NAME)

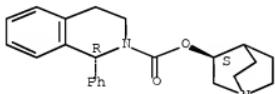
Absolute stereochemistry. Rotation (+).



HCl

RN 180468-40-0 CAPLUS
CN 2(1H)-Isoquinolinecarboxylic acid, 3,4-dihydro-1-phenyl-,
(3S)-1-azabicyclo[2.2.2]oct-3-yl ester, hydrochloride (1:1), (1R)- (CA
INDEX NAME)

Absolute stereochemistry. Rotation (-).



HC1

OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (50 CITINGS)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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STN INTERNATIONAL LOGOFF AT 10:53:17 ON 24 AUG 2009